

(No Model.)

C. W. MACWILLIAMS.  
SUGAR CANE HEADER.

No. 601,153.

Patented Mar. 22, 1898.

Fig 1

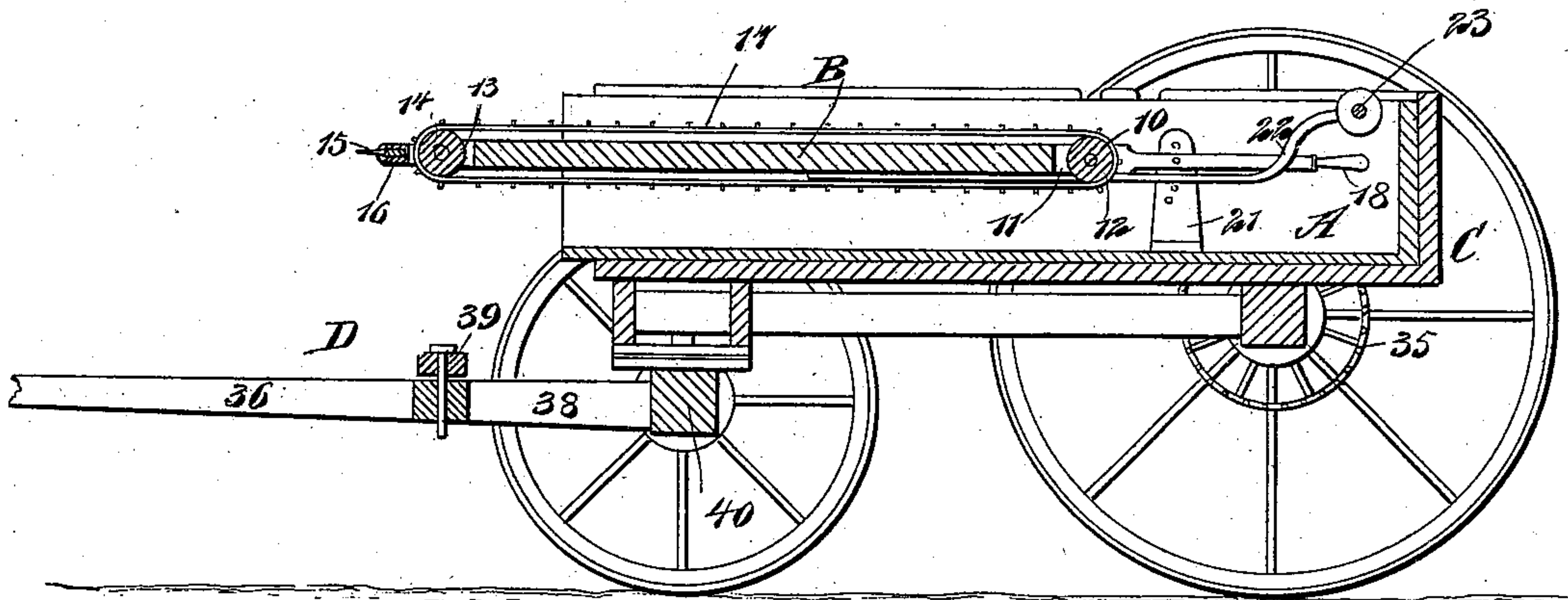
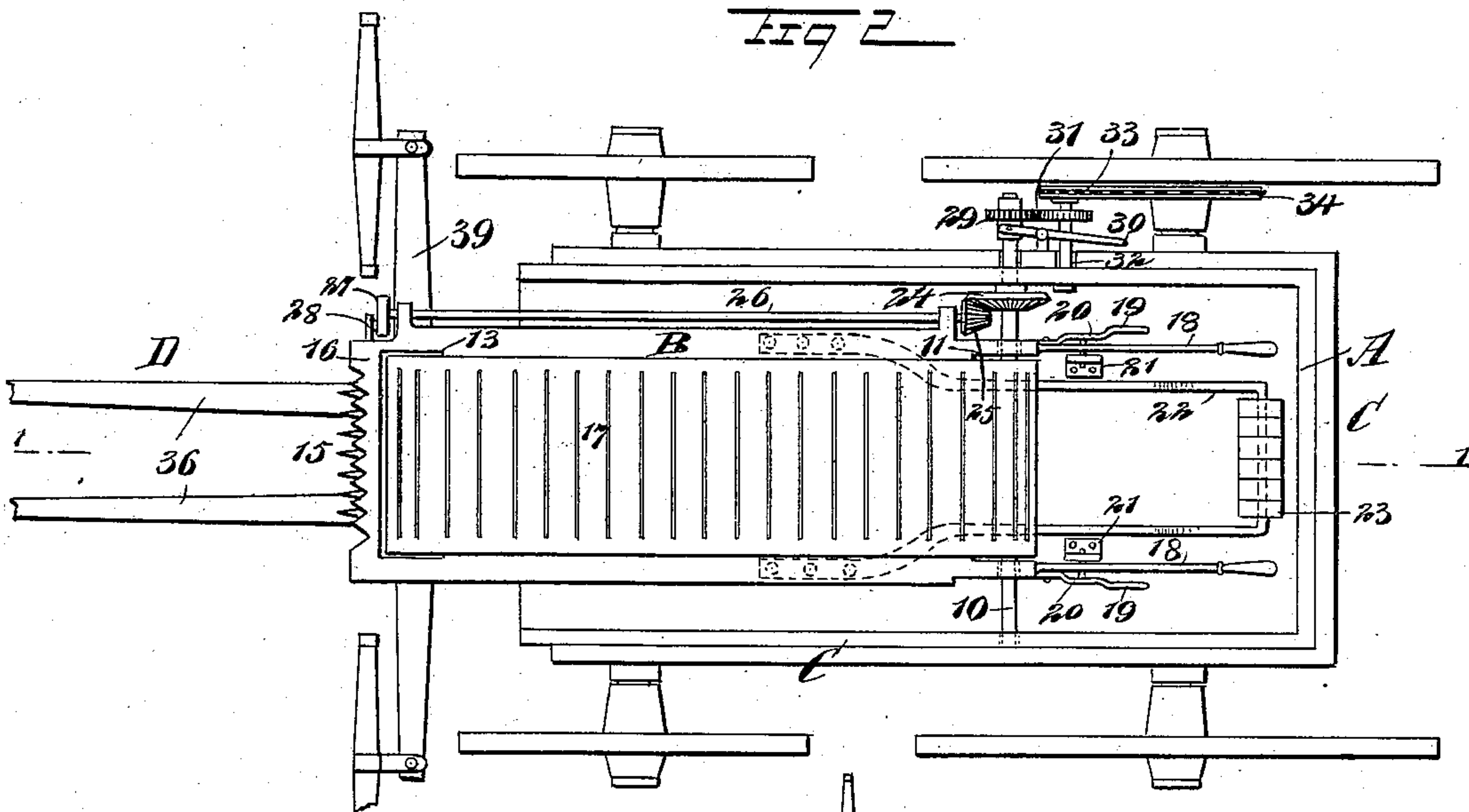


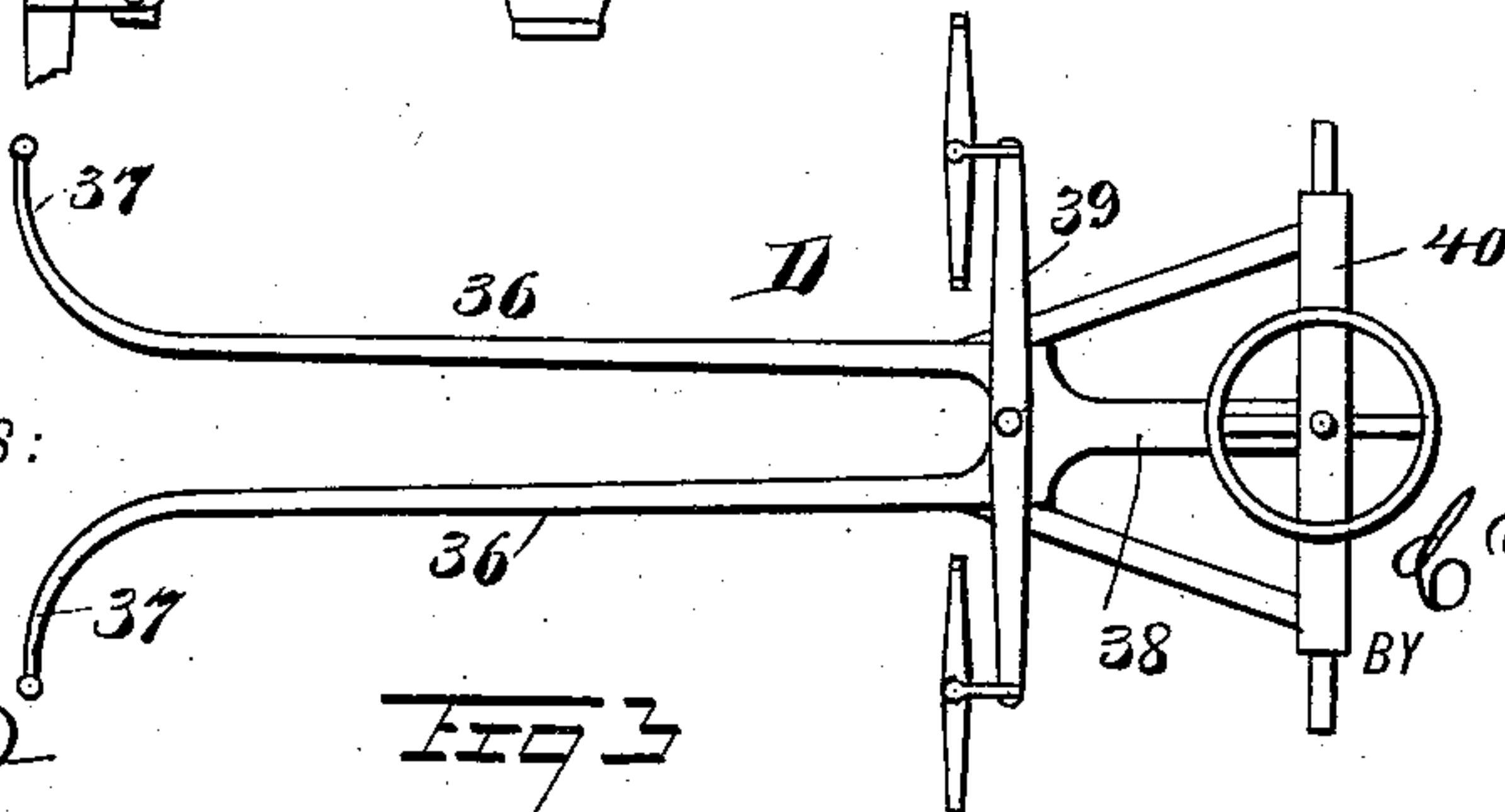
Fig 2



WITNESSES:

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Fig 3



INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

CHARLES WALTER MACWILLIAMS, OF PRESTON, CANADA.

## SUGAR-CANE HEADER.

SPECIFICATION forming part of Letters Patent No. 601,153, dated March 22, 1898.

Application filed August 3, 1896. Serial No. 601,498. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WALTER MACWILLIAMS, a subject of the Queen of Great Britain, residing at Preston, in the county of Waterloo, Province of Ontario, Canada, have invented a new and Improved Sugar-Cane Header, of which the following is a full, clear, and exact description.

My invention relates to machines especially adapted for cutting the tops or heads, and consequently the seed, from sugar-cane, Milo maize, and the like crops, in the harvesting of which it is desirable to cut off only the heads, leaving the stalks standing.

The object of the invention is to provide a machine for the above-named purpose which may be expeditiously and conveniently applied to a wagon-body and in which the knives may be raised or lowered to accommodate them to the height of the stalks, the adjustment being accomplished in an exceedingly expeditious and convenient manner.

Another object of the invention is to provide a means for conducting the severed tops from the knives back into the wagon-body of the support in which the parts of the machine are mounted; and another object of the invention is to construct a tongue applicable to the wagon, which tongue will be so formed that the stalks will pass between its members, thereby preserving the stalks in an upright position and preventing them from being trampled upon by the draft-animals.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal vertical section through a wagon and the header attachment applied to the same. Fig. 2 is a plan view of the wagon and the attachment, and Fig. 3 is a plan view of the improved tongue to be used in connection with the wagon when the wagon is provided with the header attachment.

In carrying out the invention a box-body or support A is constructed for the machine at one end and is likewise open at the top, and

is of such dimensions that it may be readily placed in a wagon-body C of the type usually employed on a farm or plantation.

At a point near the center of the body A a shaft 10 is journaled, one end of which shaft extends beyond the box-body, and a table B is fulcrumed near its inner end on the said shaft, the opening in the table through which the shaft passes being considerably larger than the diameter of the shaft, so as not to cramp the latter, since the shaft 10 is to be revolved.

At the rear end of the table B a transverse opening 11 is made, exposing the shaft 10, and in this opening a roller 12 is located, which is fast to the aforesaid shaft, the shaft 10 being a drive-shaft. Near the opposite or forward end of the table B a second transverse opening 13 is produced, in which a second roller 14 is journaled, and at the forward end of the table knives 15 of the sickle pattern are held to reciprocate between the usual guards 16, the latter being preferably formed upon or rigidly attached to the table. A conveyer-belt 17 is made to pass over the rollers 12 and 14, and consequently beneath and above the table B, and this conveyer-belt is for the purpose of conveying the material cut by the knives to the rear portion of the table, delivering it into the box-body A.

A handle 18 is preferably rearwardly projected from each side of the inner end portion of the table, as shown in Figs. 1 and 2, each handle having an attached spring-latch 19, carrying one or more pins 20, and these pins are arranged to enter any one of a number of apertures which are produced in standards 21, secured to the box-body, so that the outer or forward end of the table may be raised or lowered to bring the knives to a proper elevation to cut the heads of cane of different heights, and this adjustment, it is evident, may be readily and expeditiously made. An arm 22, preferably of a yoke pattern, is rearwardly projected from the rear end of the table, and the rear end of this arm is given an upward curve, as shown in Fig. 1, and carries at its curved end weights 23 in sufficient quantities to counterbalance the table B and the attachments to the same.

A beveled gear 24 is secured on the drive-shaft 10 at one side of the table, and this bev-



eled gear meshes with a pinion 25 of like character secured on a line-shaft 26, journaled at one side of the table, which shaft is provided at its outer end with a crank-disk 27, connected by a pitman 28 with the sickles or knives 15, imparting thereto the necessary reciprocating movement.

At the extreme outer end of the drive-shaft 10, or that end which extends beyond the box-body, a gear 29 is splined or otherwise connected with the shaft, and the said gear while turning with the shaft may be slid thereon through the medium of a shifting-lever 30. The shifting-gear 29 is usually made to mesh with a second gear 31, journaled upon a spud-axle 32, outwardly projected from the box-body A, and this spud-axle is provided also with a sprocket-wheel 33, connected by a belt 34 with a like wheel 35, attached to the hub of a rear supporting-wheel of the vehicle upon which the box-body of the attachment is placed, it being understood that suitable slots will be made in the sides of the wagon-body to receive the shafts 10 and 32.

It is necessary that the ordinary tongue of the vehicle employed should be replaced by a tongue which will not permit the draft-animals to trample upon the cane. To that end the improved tongue D that is employed (shown in Fig. 3) consists of two members 36, placed substantially parallel and having their forward ends 37 curved outwardly in opposite directions, the two members 36 being joined together at the rear and attached to a single member 38, which is to be attached to the forward axle 40 of the vehicle in like manner as the ordinary tongue or pole. A whiffletree 39 is pivoted at the rear of the bifurcated portion of the tongue in such manner that a singletree will be outside of each forward member 36, the draft-animals being therefore harnessed outside of the aforesaid forward members, so that as the machine advances the animals will travel in the paths between the rows of cane, and the cane will pass between the members of the tongue, insuring the cane being in an upright position when brought in contact with the knives. As the wagon advances the cane will pass beneath the same, remaining, however, in the ground.

The table B extends sufficiently beyond the forward end of the wagon-body to bring the knives over the bifurcated portion of the tongue.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a machine for heading sugar-cane and like plants, a wheel-supported frame open at the front end, a table fulcrumed at its rear end within the said frame and projecting beyond the forward end of the same, knives carried by the said table at its front end, handles extending rearwardly from the rear end of the said table whereby the said table

can be raised or lowered, means for holding the table in the adjusted position, and a driving mechanism arranged to impart movement to the knife, as and for the purpose set forth. 70

2. In a machine for heading sugar-cane or like plants, a box-body wheel-supported and open at its front end, a table fulcrumed at its rear end within the said body and projecting forwardly beyond the front end thereof, a counterbalance connected with the inner end of the said table and handles connected with the said table at the rear thereof, whereby the said table may be raised or lowered, means for holding the table in the adjusted position, a reciprocating knife located at the front or projecting end of the table, a conveyer held to travel over the table and receive material from the knife, and a driving mechanism for the knife and for the conveyer operated from one of the supporting-wheels, substantially as shown and described. 85

3. In a machine for heading sugar-cane and other plants, the combination with a wheel-supported frame, a table pivoted at its rear end within the said frame and projecting from the forward end thereof, an arm projected rearwardly from the rear end of the table and carrying a counterbalance-weight at its rear end, and handles extending rearwardly from the said table at each side thereof, the said handles being each provided with a spring-latch carrying pins adapted to engage apertures formed in standards secured to the box-body whereby the outer end of the table may be raised or lowered, of a knife mounted to reciprocate at the forward end of the table, a conveyer arranged to travel over the said table, a drive-shaft to which the rear elevator-roller is secured, the said shaft being operated from one of the supporting-wheels, a line-shaft journaled at one side of the table, means for operating the knife from the said line-shaft, and a driving connection between the said drive-shaft and the line-shaft, as and for the purpose set forth. 100 105 110

4. In a machine for heading cane and like plants, the combination with a supporting-frame, of a box-body arranged to be carried by said frame and open at its front end, a table fulcrumed at its rear end in the said box-body and extending forwardly beyond the front end thereof, a counterbalance connected with the rear end of the said table, means whereby the said table may be swung on its fulcrum to raise or lower the front or projecting end thereof, means for holding the table in the adjusted position, and a knife located at the front or projecting end of the table, substantially as shown and described. 115 120 125

5. In a machine for heading cane and other plants, the combination with a wheeled frame or support, of a box-body arranged to be carried by said frame and open at its front end, a table fulcrumed at its rear end in the said box-body and extending forwardly beyond the front end thereof, a counterbalance con-

5 nected with the rear end of the said table,  
means whereby the said table may be swung  
on its fulcrum to raise or lower the front or  
projecting end thereof, means for holding the  
table in the adjusted position, a knife located  
at the front or projecting end of the table,  
and a conveyer held to travel over the table

and receive the material from the knife, sub-  
stantially as shown and described.

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Witnesses:

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